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Roles for the IS Executive: A Conceptual Model

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Abstract

Many roles have been proposed for the IS executive (ISE). The roles combine to form a superset from which the organization and the ISE each choose a subset of roles to emphasize. It is proposed that the fit between the two subsets affects ISE success. In turn, the success of the ISE leads to IS success. The paper concludes with suggested empirical tests of the model.

Introduction

Ever since the management of information systems (IS) has been considered of strategic importance (King, 1978), there has been a commensurate recognition of the need for the IS executive (ISE) to be a real player in the highest level of management (Synott and Gruber, 1981). If IS is to provide organizational competitive advantage (Ives and Learmonth, 1984), it is not inconceivable that the ISE should play a key role in such endeavors. This last point is even more crucial if the organization is attempting to proactively build competitive advantage rather than react to strategic necessity (Harkness, Kettinger and Segars, 1996).

This research examines the factors contributing to the role choices made by the organization and the ISE. Also examined is how the degree of fit between role choices leads to ISE and IS success. The underlying premise for the model is that the better the fit, the more successful the ISE; a successful ISE increases IS success. The next section details the conceptual model. After the model is specified, ways in which the model can be tested are provided. The concluding section outlines contributions of this research.

Conceptual Model

The ISE literature has proposed an extensive set of roles for the ISE. The list comes from observing ISE's (Nolan, 1976; Ives and Olson, 1981; Feeny, Edwards and Simpson, 1992), interviewing ISE's (Applegate and Elam, 1992; Benjamin, Dickenson and Rockart, 1985; Earl and Feeny, 1994) surveying ISE's (Brown, Krawan and Weitzel, 1988; Grover, Jeong, Kettinger and Lee, 1993; Taggart and Silbey, 1979) and prescribing ISE roles (Rockart, Ball and Bullen, 1982; Synott and Gruber, 1981). A steering committee approach has even been advocated as a replacement for the ISE (Nolan, 1982). It is neither desirable nor feasible for an individual to equally emphasize every role in the set. Exactly what choice of roles will achieve success is not clear (Rockart, Ball and Bullen, 1982). The issues surrounding the choice of roles are captured in the conceptual model shown in Figure 1.

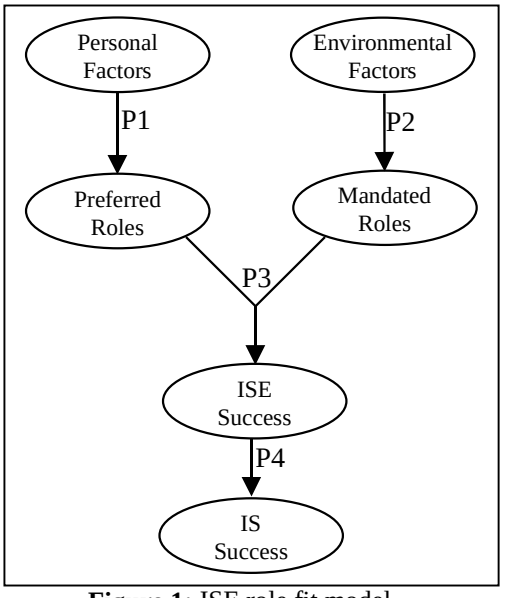

Figure 1: ISE role fit model

The model includes the following propositions:

Proposition 1: Personal factors determine the set of roles preferred by the ISE.

Proposition 2: Environmental factors determine the set of roles mandated for the ISE.

Proposition 3: The better the fit between the roles preferred by the ISE and the roles mandated for the ISE, the more successful the ISE.

Proposition 4: A more successful ISE leads to greater IS success.

Proposition 1 deals with factors that are personal to the ISE. He or she will have a given background including education, experience and style. Age and gender have already been shown to be important ISE attributes, at least in terms of compensation (Baatz, 1996a). One controversial factor is how much technical experience the ISE should possess. Several anecdotes on non-technical CEO's brought in to lead organizations in the computer industry show that such a move does not

generally work out for those organizations (Coy, 1993). A similar argument can be made for the ISE, as CEO of the IS function, i.e. a non-technical ISE will probably not succeed. While experience in technology is necessary for the ISE, that does not mean that as ISE, he or she needs to dabble extensively in bits and bytes. Rather, technology experience allows the ISE to have an understanding of the general nature of the technological beast he or she is responsible for (Emery, 1989; 1993). Several writers have also commented that the ISE needs to have a management style or orientation (Miller and Gibson, 1995; Applegate and Elam, 1992; Stephens, Ledbetter, Mitra and Ford, 1992; Brier, 1994; Wakin, 1995). For example, the ISE must be able to relate to the highest level of organizational management in terms that they can understand (Stephens and Loughman, 1994). Similarly, he or she needs a certain amount of consulting skill (Field, 1996).

Proposition 2 states that the environmental factors of the model create a set of roles independent of the person who fills the ISE position. Environmental factors include the structure of the organization's industry as well as the size and location of the organization. For example, the role of the ISE is of greater importance in information intensive industries such as financial services (Brown, Krawan and Weitzel, 1988). It tends to be very large organizations that benefit most from an ISE (Brown, Krawan and Weitzel, 1988). The country where the ISE is based can also affect the ISE's role (McLeod, et al., 1997). Perhaps the organization considers a network or infrastructural focus of crucial ISE significance (Teixeira and Schmergel, 1992; Donovan, 1988). The part of our model encompassing the environmental factors draws significantly from Rockart, Ball and Bullen, 1982.

Several of the environmental factors arise from the structure of IS organization. Depending on characteristics such as size, maturity and scope of operations, the ISE may lead in very different IS contexts (Grover, Jeong, Kettinger and Lee, 1993; Raghunathan and Raghunathan, 1989). Another factor to consider is the ISE's location in the corporate hierarchy (Raghunathan and Raghunathan, 1989; Applegate and Elam, 1992). To play a strategic role, the ISE does not necessarily report directly to the CEO; in fact, the ISE was most often found to be reporting to the CFO (Carlyle, 1988). As long as the ISE is an active party to the highest level decision making, he or she can better align the IS organization's strategy and tactics with those of the business (Stephens, Mitra, Ford and Ledbetter, 1995; Lederer and Mendelow, 1989; Enns and Huff, 1998). Finally, the CEO's attitude to IS, as the major focus of several studies (Feeny, Edwards and Simpson, 1992; Earl and Feeny, 1994; Jones, Taylor and Spencer, 1995) deserves inclusion as an environmental factor. It is conceivable that a large part of the variance in ISE success can be explained by this single factor. Hence, to omit such an important factor would introduce a significant amount of systematic variance to the model.

There is a paradox in the technical experience-management orientation issue. Essentially, you take an individual who has been steeped in technology for a large part of his or her career and ask that person to take on a managerial role (Applegate and Elam, 1992). The roles of a technologist and a manager require the application of very different sets of knowledge, skills and abilities. If Harvard's Howard Gardner is to be believed, competence in one in no way implies competence with another (Koch, 1996). The two skill sets are sufficiently different that it may be that being good at one may even preclude being good at another (Wilson, 1994). It is possible to conclude that IS personnel, including the ISE, are treated differently than their organizational counterparts; fortunately, this is not case (Ferratt and Short, 1988).

The notion of fit, captured in proposition 3, is not new. This model shows a fit between preferred and mandated roles, an idea first proposed in Nolan, 1976. Gertstein and Reisman, (1983) wrote about different strategic situations (such as startups and turnarounds) and how a different type of executive would be the best fit for each of the strategic situations.

If research into the relative power of situations over individual characteristics is to be believed (for example, Milgram's research into obedience (Milgram, 1974), and Zimbardo's jail experiments (Zimbardo, 1969)) the situation is a much more powerful determinant of behavior than individual characteristics or preferences. By implication, the ISE tends to conform to mandated roles. However, in the long run, significant differences between mandated and preferred roles are likely to lead to a termination of the ISE, either voluntarily or otherwise (Igbaria, 1991; Baroudi, 1985).

Given that a lack of fit tends to shorten ISE tenure, ISE success should include length of time at the current ISE position as well as anticipated future tenure at that position. Though conventional wisdom would peg the ISE's tenure as shorter than that of other executives' (Nolan, 1973; Brown, 1992), more recent evidence casts doubt on this perception (Baatz, 1996b). Another candidate for inclusion in the ISE success construct is the quality of the CEO/ISE relationship (Feeny, Edwards and Simpson, 1992).

Proposition 4 makes the case that if an ISE is successful, then his or her success should be a contributing factor to overall IS success. For example, if the ISE is a success, that may mean a better chance for successful implementation of the IS strategy (Enns and Huff, 1998).

Further Research

A key premise of this work is the existence of an ISE role superset. But no detail of the superset has been provided. A first step for empirical work would be to determine the roles within the superset. One way to determine potential ISE roles is to look at previous research. For example, one readily accepted set of roles is that put forward by Mintzberg in 1971. According to Mintzberg, the ten roles are position independent and apply to any executive. Mintzberg's managerial roles are widely accepted and operationalizations are well validated (Martinko and Gardner, 1990), even within ISE research (Grover, Jeong, Kettinger and Lee, 1993). Despite the fact that the work of different executives can be examined under the same light of Mintzberg's roles, there are components of an executive's job that will be specific to his or her position. Hence, adoption of the Mintzberg roles can only capture a part of the superset. Technology-specific roles may also need to be included as potential ISE roles, though doing so may make the roles too contemporary as technology and the ISE position evolve.

If a survey were to be carried out to address the four propositions, it is envisaged that both the ISE and the CEO would be respondents. There are two potential limitations to a survey. Response rates for both ISE and CEO surveys are notoriously low. The agenda model would require a paired matching of both ISE *and* CEO responses, in all likelihood leading to a truly dismal response. Secondly, to cover all the issues raised in the model would require an extensive questionnaire, further reducing response rates. This last point may be why quite a few ISE and CEO/ISE empirical studies have been carried out using a small number of interviews and case studies (e.g. Benjamin, Dickenson and Rockart, 1985; Earl and Feeny, 1994; Feeny, Edwards and Simpson, 1992; Ives and Olson, 1981; Nolan, 1976; Stephens, Ledbetter, Mitra and Ford, 1992).

Conclusions

Ever since the first substantial thought on the 'new' role of the ISE in Nolan, 1976, many authors have given their opinions on the role of the ISE, creating a vast superset of roles. The proposed model highlights factors contributing to role choices made by organizations and the ISE. By doing so, it is hoped that more progress can be made on divining the roles contributing to the success of the ISE, the IS group and the organization. The model helps an organization to think about the roles that it wants the ISE to fulfil. The model also alerts the ISE to examine the roles that he or she desires to fill. The better the match between the two sets of roles, the greater the success of the ISE, of IS and of the organization.

References: available upon request from first author.